

## Company Information:

SemiSouth Laboratories, Inc. develops and manufactures high-performance SiC epitaxy & electronic components.

## Area of Expertise:

- Growth of 100-200  $\mu\text{m}$  epitaxy with proven 10  $\mu\text{m/hr}$  growth rate
- Advancement of epitaxy technology to achieve higher growth rates
- 2 PhD's + support staff (15+ yrs exp.)
- Multiple hot-wall reactors
- “Virtually” integrated epiwafer supplier through alliance with II-VI, Inc.

## Previous Relevant Accomplishments:

- 50  $\mu\text{m}$  epitaxy w/ 8% thickness uniformity
- 120  $\mu\text{m}$  epitaxy w/ 8% thickness uniformity
- $N_d < 5 \times 10^{14} \text{ cm}^{-3}$  doping concentration
- Up to 15  $\mu\text{m/hr}$  growth rate

## For more information please contact:

**Dr. Jeffery B. Casady, President**

SemiSouth Laboratories, Inc.  
1 Research Blvd, Suite 201B  
Starkville, MS 39759

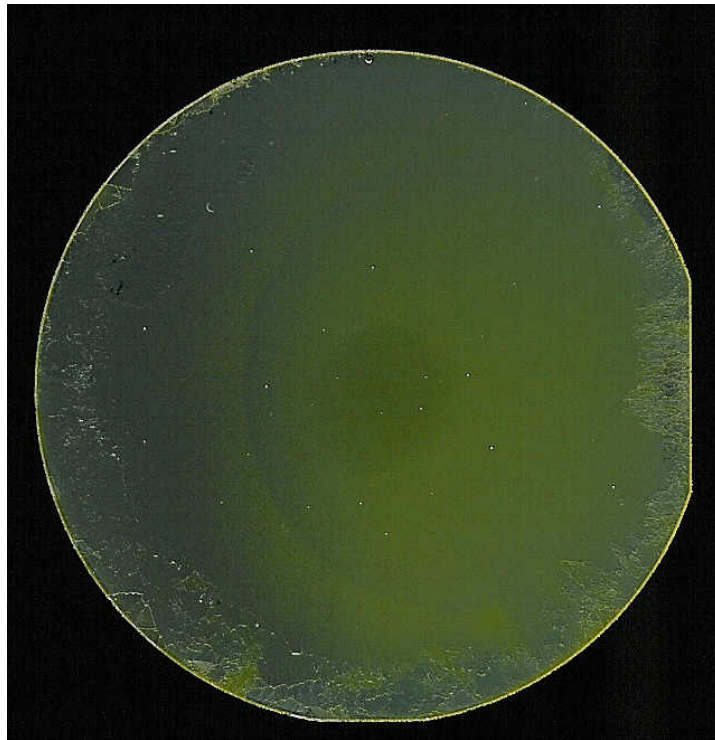
Ph: 662-324-7607

Fax: 662-324-7997

Email: [Jeff.Casady@SemiSouth.Com](mailto:Jeff.Casady@SemiSouth.Com)

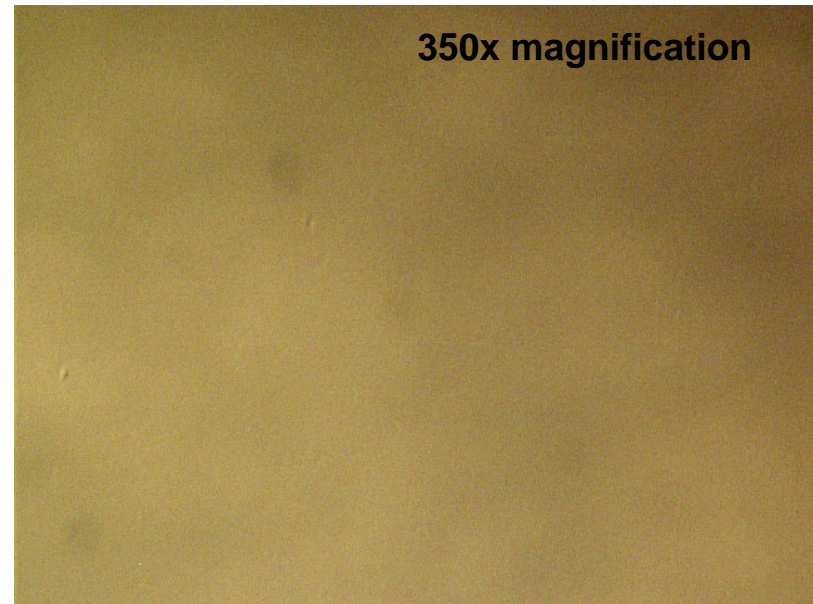
[www.SemiSouth.com](http://www.SemiSouth.com)

# Thick Epitaxy – 50 $\mu\text{m}$



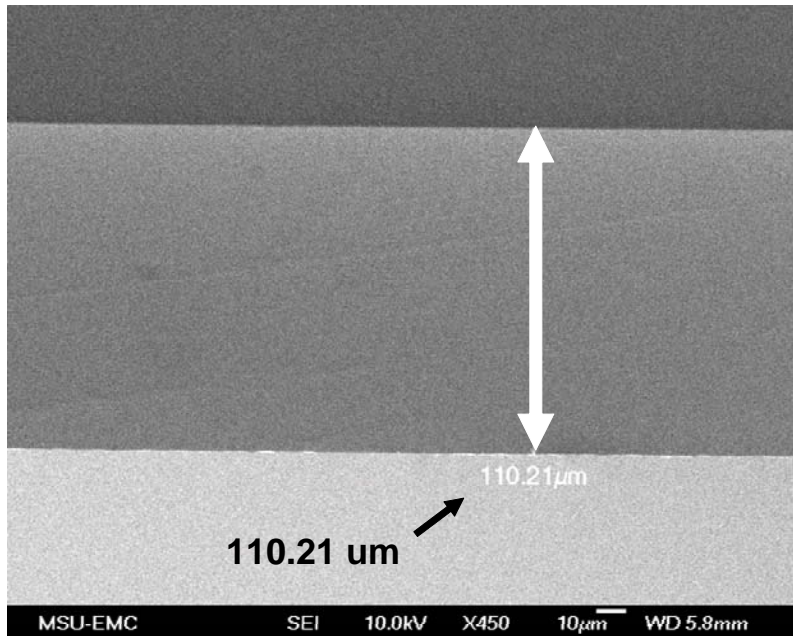
Particle density:  $1.3 \text{ cm}^{-2}$

**NOTE: grown on a mechanical substrate of bad quality**



- Excellent surface morphology
- Thickness – 49-50  $\mu\text{m}$
- Growth rate – 10  $\mu\text{m/h}$
- Background  $\sim$  5e14
- Thickness uniformity  $\leq$  8%

# Thick Epitaxy – 120 $\mu\text{m}$

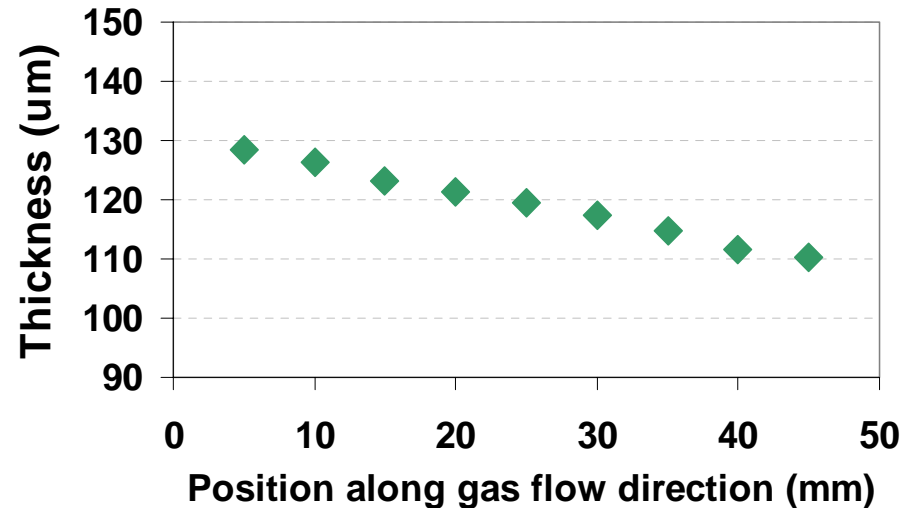


Average thickness: **119  $\mu\text{m}$**

Growth rate: **15  $\mu\text{m}/\text{h}$**

Uniformity: **7.6%**

Particle density: **1.0  $\text{cm}^{-2}$**



**Low Background**

